Research into Optical Reflection Dynamics Suggests Need to Revise Treatment of Inertia in the Standard Model; New Insights into Increase in Size of Older Stars as well as Dynamics of Ultracold Materials

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Introduction

The Standard Model of Physics holds that inertia is the result of and proportional to mass. In seeking to divine the true dynamics of the phenomenon of optical reflection, it was recently postulated that light may be slowed on attosecond timescales by Coulomb Force Lines, its angular momentum converted into rotational momentum. This increased rotational velocity results in increased magnetic output sufficient to negate influxing neutrinos associated with the local microgravity of the photon thereby reducing the inertia of the particle and therefore reducing also the amount of force required to re-accelerate that particle back to its original velocity. Profoundly, angular momentum is conserved, according to this new postulation, via inertial dampening and not through absorption and re-emission of the light as is currently believed generally in the optics community.

Abstract

While inertia and mass are frequently proportional to one another, the recent postulation suggests that inertia is not the direct result of the presence of mass. With this understanding, we may begin to better understand the strange behavior of not only light during reflection events, but also the behavior of materials at temperatures approaching absolute zero as well as certain stellar dynamics.

If inertia is not the direct result of mass but rather the result of symmetrical neutrino fields A.K.A. gravitational fields of the sort associated with the microgravity of an object in space and it is also true that magnetism can negate neutrinos both within the context of those neutrinos found in electrons as well as those in flight, an object with very little mass such as a single photon could, should it emit sufficient magnetism, negate (through mass inversion and/or annihilation) the influxing neutrinos.

While transverse or asymmetrical neutrino fields result in what is termed gravitational pull and the compression associated with "weight," inertia in its purest form (in a weightless environment) is the exclusive result of the microgravity of the object itself and has nothing to do with the gravity of larger surrounding bodies. Only local microgravity can be a source of inertia as only an object's own, specific gravity is sufficiently symmetrical to hold an object in place. To employ an analogy, if a carpenter wishes to brace a piece of wood or other object, they would use a vise in order to apply force that is applied

symmetrically from two or more directions which is applied toward the same, central point.

If, in this analogy, force were to be applied asymmetrically or from only one direction, as in the case of a broken or miscalibrated vise, the vise would do little to stabilize the object and it would be free to move about in undesirable ways. Natural physical dynamics ensure that every particle with mass has a symmetrical associated gravity field given the spherical nature of all particles in the Universe. It is only because of this symmetry that particles and objects have inertia. Even large, asymmetrical objects have inertia that is proportional to the sum of the specific gravity of all of the constituent atoms in the object due to the strength of the bonds between atoms as well as the ability of very large objects (such as planets) to, although they are made mostly of solids, to behave under certain conditions as liquids, as in the case of shifting earth in the case of earthquakes and tectonic movements. In the case of a planet, a planet has inertia proportional to its mass only with the corollary that this inertia has a delayed response time as the "pushback" against, for instance, a meteor striking a section of the planet takes time to ripple through the planet as a whole.

If inertia as well as the amount of compressive force an object receives as the result of its own gravity is governed not directly by its mass but rather by a value that takes into account both influxing neutrinos and the proportion of those neutrinos that manage to make it through to the object (past the discrete magnetic field of the atoms composing that object) then an object's magnetism and temperature (currently believed by the community to be unlinked to inertia) would have a decisive impact on its inertia as well as other physical properties.

In the case of a star, it is currently accepted as canon that the depletion of "nuclear fuel" results in a reduction of gas pressure that results "in gravitational forces winning out" and resulting ultimately in the collapse of the star into a neutron star. This notion is patently false. A reduction in gravity, it is currently taught to university students, results in the gas comprising a star taking up a greater volume of space despite there being less of it. If nuclear fuel is being converted both into energy and into heavier elements deposited in the core of the star (not to mention mass lost in CMEs) it should stand to reason that diminished gravity should be offset by the conversion or loss of that mass and that stellar volume should be unaffected if only these variables are taken into account.

In reality, it is the weakening of the magnetic field that results in the increased volume of stellar gasses, however, the manner in which that occurs is indirect. Like any membrane, the strength of that field, be it sufficient to contain its contents, has no direct bearing on the volume of the contents. It is not as if the magnetic field pushes the contents of the star inward with sufficient force to alter its volume. These fields are merely strong enough to prevent the escape of hydrogen the vast majority of the time. In the case of a star, small areas of weakness in these fields can result in Coronal Mass Ejections, however, these events do not lead to supernovae or the collapse of the star given that they are

merely areas of localized weakening of the field rather than wholesale suspensions of such. Current doctrine has failed to account for the simultaneous collapse of one part of a star and the release of massive amounts of hydrogen gas that is not pulled into the collapsed star. This duality may be explained by the abrupt suspension of a star's magnetic field allowing the release of gasses (i.e. they are under pressure.) Given that the amount of gravity that a star experiences (relative to mass) increases as its magnetic field weakens (given that magnetism negates a portion of the gravitational compression a star would otherwise experience,) it could account for the expansion of older stars and their ability to contain these gasses despite the weaker field as well as the compression of stellar remnants into dormant neutron star material whilst substantial mass is sloughed off during this conversion process. Current astrophysical doctrine, in contrast to this novel hypothesis, fails to link the weakening of the magnetic field of a star to its expansion. As magnetons tend invert the mass of neutrinos, this hypothesis provides a more plausible and complete explanation of stellar dynamics in addition to optical dynamics. This hypothesis explains both the expansion of older stars as well as the sudden collapse of dying stars into neutron stars as the protracted suspension of the fusion reaction independent of the presence of available fuel) of nuclear fuel would necessarily result in a cessation of the magnetic field, resulting thence in both the release of massive quantities of gasses upon the cessation of that field from low-density outer regions of the star and the compression of high-density regions below a certain stellar depth. When a star's magnetic field is abruptly suspended, we can expect that the compressive forces of gravity would abruptly increase as the full brunt of neutrino influx would suddenly be unleashed without any countervailing magnetic current being at play.

Not only does this new hypothesis recommend substantial revision to astronomical and optical doctrine, it suggests that the physics of the extremely cold may now be understood in a far more comprehensive way that would not have been possible without this insight. The reason for this, naturally, is the way in which magnetism is nullified at these extremely cold temperatures.

As the temperature of an atom approaches zero Kelvin, the spin of its electrons gradually comes to a halt. It is already understood that this is the reason for the suspension of discrete magnetism at these temperatures. What is not understood in the physics community, however, is that because a direct relationship exists between magnetism and inertia, the suspension of magnetism results in the non-trivial amplification of inertia (just as the amplification of discrete magnetism dampens inertia.) The behavior of ultracold atoms, therefore, can be entirely explained by their amplified inertia. Something being cold means it's moving less, but when something's inertia is amplified, exponentially more force is required in order to move that object.

Ibid. the publication concerning bringing about self-sustaining ultracold temperatures, maintaining extremely low temperatures is most likely the most practical approach for amplifying inertia, although it is not the only approach. All of these efforts have been focused upon making physical materials

increasingly cold by physicists who do not actually understand *why* it is that making something cold is so drastically altering its behavior. Once the relationship between magnetism and inertia is taken into account, one may begin to further-enhance inertial amplification methods through the introduction of positive neutrino fields. Ibid. the publication concerning using such fields in order to generate entanglements, it was implied that generating areas of excess neutrino concentration's primary application was in the area of generating entanglements. It may, as it turns out, also be applied in order to increase the inertia of both ultracold and room temperature materials.

It makes good sense that any step we take to increase inertia would aid in generating entanglements, be it reducing the temperature of a material or be it two-proton resonance traps and their resultant neutrino emissions. If two collocated electrons or photons have a lessened tendency toward alteration to their angular momentum, phase, polarity, spin orientation, etc., those particles would naturally have a greater likelihood of mutually pointing in one another's direction over the lengths of time required to generate a synchronicity.

Conclusion

That inertia has its roots in specific gravity and not in mass is an insight that may open the door to non-trivial technological innovation in the medium to long term.